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                 Current-awareness alert (SDI) setup and editing
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                 WPIDS, WPINDEX, and WPIX enhanced with Canadian PCT
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L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1990:533571 CAPLUS DN 113:133571

OREF 113:22717a,22720a

ED Entered STN: 13 Oct 1990

TI Polystyrene foam containing carbon black IN Romesberg, Floyd E.; DeBenedictis, Mach A.

PA Dow Chemical Co., USA

SO Eur. Pat. Appl., 14 pp. CODEN: EPXXDW

DT Patent

LA English

ICM C08K003-04 IC

ICS C08L025-00; C08J009-04; C08J009-16; C08J011-06

CC 37-6 (Plastics Manufacture and Processing)

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C08J000 | B29K0105-04)7-00 [N,A]; C08J0009-04)9-16 [I,A]; C08L0025-00)9-00 [ICM,5] B29K0105-04)7-00 [N,A]; C08J0009-04 (C08L0025-00)9-16 [I,A]; C08J0009-04)7-00 [ICM,5] C08L0025-00 (C08L0025-00 (C08L0000-00 (C08L00000 | ; B22 [N,12 CO81 [I,0] | 720047-00 [I,A]; 1); B29K0105-14 10009-00 [I,C*]; 2); C08L0025-06 2); C08L0025 | \$29K0025-00 [N,A]; C08J0009-00 [1,A]; C08J0009-00 [1,A]; E08K0025-00 [N,A]; C08J0009-00 [1,A]; C08K0003-04 [1,A] B29K0025-00 [N,A]; C08J0009-00 [1,A]; C08C003-04 [1,A]; |
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                        B29L0007-00 [N,A]; C08J0009-00 [I,C*]; C08J0009-00
                        [I,A]; C08J0009-04 [I,A]; C08J0009-12 [I,A];
                        C08J0009-16 [I,A]; C08K0003-00 [I,C*]; C08K0003-04
                        [I,A]; C08L0025-00 [I,C*]; C08L0025-06 [I,A]
AB
    Extruded, molded, or ground foam (closed-cell content ≥95%), useful
     in thermal insulation, is manufactured from polymers containing ≥60% aromatic
     alkenyl compound and 1-25 phr carbon black (particle size 10-100 nm, surface
     area 10-1500 m2/g) in the cell walls. Thus, polystyrene particles containing
     5% carbon black (particle size 15 nm, surface area 1475 m2/g), 10 phr
     CC13F, 0.07 phr Ca stearate, and 1.7 phr hexabromocyclododecane were
     heated 30 min at 60°, cooled, dried, prefoamed for 30-150 s, and
     molded 120-150 s in steam to give slabs with d. 2.07-2.28 lb/ft3, cell
     size 0.19-0.24 mm, and thermal conductivity 9.7-11.5% lower than similar foams
     without carbon black.
ST
    carbon black polystyrene foam; thermal insulation polystyrene foam
IT
     Carbon black, uses and miscellaneous
     RL: USES (Uses)
        (polystyrene foam containing, for thermal insulation)
IT
     Thermal insulators
        (polystyrene foam, containing carbon black)
     9003-53-6, Polystyrene
     RL: PRP (Properties)
        (cellular, containing carbon black, for thermal insulation)
=> s ep 0126459/pn
L2
             0 EP 0126459/PN
=> s ep 126459/pn
             0 EP 126459/PN
L3
=> s carbon black#(6a)(t990 or printex 85)
L4
            57 CARBON BLACK#(6A)(T990 OR PRINTEX 85)
=> s (expand? or foam?) (4a) (styren? or vinvl(1a) aromatic or vinvlaromatic or
polystyren?)
         40285 (EXPAND? OR FOAM?) (4A) (STYREN? OR VINYL(1A) AROMATIC OR VINYLARO
               MATIC OR POLYSTYREN?)
=> s 14 and 15
1.6
            2 L4 AND L5
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L6 ANSWER 1 OF 2 USPATFULL on STN

ACCESSION NUMBER: 2008:283412 USPATFULL

TITLE: Expandable Granulates Based on Vinvl

-Aromatic Polymers Having an Improved

Expandability and Process For the Preparation

Thereof

INVENTOR(S): Felisari, Riccardo, S. Giorgio di Mantova, ITALY Ghidoni, Dario, Gonzaga (Mantova), ITALY

Ponticiello, Antonio, Mozzecana, ITALY

Casalini, Alessandro, Mantova, ITALY

NUMBER KIND DATE

PATENT ASSIGNEE(S): POLIMERI EUROPA S.p.A., San Donato Milanese (MI), ITALY

(non-U.S. corporation)

US 20080248272 A1 20081009 US 2006-90759 A1 20061018 (12) WO 2006-EP10045 20061018 PATENT INFORMATION: APPLICATION INFO.:

20080610 PCT 371 date

NUMBER DATE

PRIORITY INFORMATION: IT 2005-MI1963 20051018 DOCUMENT TYPE: Utility

FILE SEGMENT:

APPLICATION LEGAL REPRESENTATIVE: BUCHANAN, INGERSOLL & ROONEY PC, POST OFFICE BOX 1404, ALEXANDRIA, VA, 22313-1404, US

EXEMPLARY CLAIM: 26
LINE COUNT:

574

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Expandable granulates having a composition based on vinvl-aromatic polymers, essentially consisting of:

65-99.8% by weight of a copolymer obtained by polymerizing 85-100% by weight of one or more vinyl-aromatic monomers having general formula (I) and 0.15% by weight of an alpha-alkylstyrene; 0-25% by weight, calculated with respect to the polymer (a), of carbon black; at least one of the following products:

- 0.01-5% by weight of graphite having an average diameter ranging from 0.5 to 50
- 0.01-5% by weight of oxides and/or sulfates and/or lamellar dichalcogenides of metals of groups IIA, IIIA, IIIB, IVB or VIIIB,
- 0.01-5% by weight of inorganic derivatives of silicon of the lamellar type; 0-5% by weight, calculated with respect to the polymer (a), of a nucleating agent; 1-6% by weight, calculated with respect to the total, of an expanding agent.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L6 ANSWER 2 OF 2 USPATFULL on STN

ACCESSION NUMBER: 2006:322511 USPATFULL

TITLE: Expandable vinylaromatic polymers and process for their preparation INVENTOR(S): Ponticiello, Antonio, Mozzecane, ITALY

Simonelli, Alessandra, Torino, ITALY

Zamperlin, Loris, Porto Mantovano-Mantova, ITALY

NUMBER KIND DATE PATENT INFORMATION: US 20060276557 A1 20061207 APPLICATION INFO.: US 2004-551524 A1 20040311 (10) WO 2004-EP2840 20040311 20060815 PCT 371 date

NUMBER DATE

PRIORITY INFORMATION: IT 2003-MI627 20030331

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: C. IRVIN MCCLELLAND, OBLON, SPIVAK, MCCLELLAND, MAIER &

NEUSTADT, P.C., 1940 DUKE STREET, ALEXANDRIA, VA,

22314. US 21

NUMBER OF CLAIMS: EXEMPLARY CLAIM: 1 LINE COUNT: 515

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Expandable vinvlaromatic polymers which comprise: a)

a matrix obtained by polymerizing 50-100% by weight of one or more vinylaromatic monomers and 0-50% by weight of a copolymerizable monomer; b) 1-10% by weight, calculated with respect to the polymer (a) of an expanding agent englobed in the polymeric matrix; c) 0.01-20% by weight, calculated with respect to the polymer (a) of carbon black distributed in the polymeric matrix having an average diameter ranging from 30 to 2000 nm, a surface area ranging from 5 to 40 m.sup.2/g, a sulfur content ranging from 0.1 to 2000 ppm and an ash content ranging from 0.001 to

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> s carbon black#(20a)(sulfur(2a)(level or content)) 207 CARBON BLACK#(20A) (SULFUR(2A) (LEVEL OR CONTENT))

=> s carbon black#(20a)(ash(3a)(level or content#))

314 CARBON BLACK#(20A) (ASH(3A) (LEVEL OR CONTENT#))

=> s 17 and 18 L9 23 L7 AND L8

=> s 15 and 19 T-10 1 L5 AND L9

=> d 110 1 ibib abs

L10 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:847589 CAPLUS

DOCUMENT NUMBER: 141:332963

TITLE: Carbon black-containing expandable

vinvlaromatic polymers suitable for production

of thermal insulators

INVENTOR(S): Ponticiello, Antonio; Simonelli, Alessandra;

Zamperlin, Loris
PATENT ASSIGNEE(S): Polimeri Europa S.P.A., Italy

SOURCE: PCT Int. Appl., 28 pp. CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English FAMILY ACC. NUM. COUNT: 1 PATENT INFORMATION:

| E | PATENT NO. | | | | | | KIND DATE | | | APPLICATION NO. | | | | | | | DATE | | | |
|--------|------------|------|------|-------|-----|-------------|-----------|------|------|-----------------|----|--------|------|-----|-----|----------|------|-----|--|--|
| To To | ıΩ | 2004 | 0877 | 9.8 | | Δ1 | | 2004 | 1014 | WO 2004-EP2840 | | | | | | 20040311 | | | | |
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| | | | TJ, | TM, | TN, | TR, | TT, | TZ, | UA, | UG, | US | , UZ, | VC, | VN, | YU, | ZA, | ZM, | ZW | | |
| | | RW: | BW, | GH, | GM, | KE, | LS, | MW, | MZ, | SD, | SL | , SZ, | TZ, | UG, | ZM, | ZW, | AM, | AZ, | | |
| | | | BY, | KG, | KZ, | MD, | RU, | TJ, | TM, | AT, | BE | , BG, | CH, | CY, | CZ, | DE, | DK, | EE, | | |
| | | | ES, | FI, | FR, | GB, | GR, | HU, | IE, | IT, | LU | , MC, | NL, | PL, | PT, | RO, | SE, | SI, | | |
| | | | SK, | TR, | BF, | BJ, | CF, | CG, | CI, | CM, | GA | , GN, | GQ, | GW, | ML, | MR, | NE, | SN, | | |
| | | | TD, | TG | | | | | | | | | | | | | | | | |
| | | 2519 | | | | A1 | | | | | | 2004- | | | | | | | | |
| | | 1608 | | | | A1 20051228 | | | | | EΡ | 2004- | 7194 | 54 | | 2 | 0040 | 311 | | |
| E | ΞP | 1608 | | | | B1 | | | | | | | | | | | | | | |
| | | R: | | | | | | | | | | , IT, | | | | | | | | |
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| | | 1768 | | | | A | | | | | | 2004- | | | | | | | | |
| | | 2006 | | | | | | | | | | 2006- | | | | | 0040 | | | |
| | | 2327 | | | | C2 | | | | | | 2005- | | | | | | | | |
| | | 3981 | | | | | | 2008 | | | | 2004- | | | | | 0040 | | | |
| | | 2308 | | | | Т3 | | | | | | 2004- | | | | | 0040 | | | |
| | | 2005 | | | | | | | | | | 2005- | | | | | 0050 | | | |
| | | 2006 | | | | AI | | 2006 | 120/ | | | 2006- | | | | | 0060 | | | |
| PRIORI | T T 7 | APP. | LIV. | TMF.O | . : | | | | | | | 2003-1 | | | | | 0030 | | | |
| | | | | | | | | | | | WO | 2004-1 | FFZ8 | 4 U | | w Z | 0040 | 211 | | |

AB An expandable vinylarom. polymer comprises (a) a matrix obtained by polymerizing 50-100% of one or more vinylarom. monomers and 0-50% of a copolymerizable monomer, (b) 1-10%, calculated with respect to the polymer (a), of an expanding agent in the polymer matrix, (c) 0.01-20%, calculated with respect to the polymer (a), of carbon black distributed in the polymer matrix and having an average diameter from 30 to 2000 nm, a surface

area

from 5 to 40 m2/g, a sulfur content from 0.1 to 2000 ppm, and an ash content from 0.001 to 1%. The expandable vinylarom. polymer is useful in production of plastic foams having low d. and reduced thermal conductivity Thus, water (150), sodium pyrophosphate (0.2), styrene (100), benzoyl peroxide (0.25), tert-Bu perbenzoate (0.25), and carbon black T 990 (1 part) were charged into a stirred closed container, the carbon black having an average diameter of 362 nm, a BET of 10 m2/g, an ash content of 0.02%, a sulfur content of 60 ppm, a weight loss with heat of 0.1%, a DBPA number of 44 mL/(100 g). The mixture was heated to 90° and stirred for 2 h at 90°, followed by adding 4 parts of a 10%-solution of polyvinylpyrrolidone, heating the mixture for 2 h to 100°, adding 7 parts of a 70/30 mixture of n-pentane and isopentane, heating for 4 h to 125°, and cooling the mixture. The beads of the expandable polymer were recovered and washed with deionized water containing 0.05% of a nonionic surfactant.

^{=&}gt; d 19 1-23 ibib abs

ACCESSION NUMBER: 2006:117489 USPATFULL

TITLE: Sealing structure of fuel cell and process for molding

rubber packing

INVENTOR(S): Nakamura, Yuzo, Kobe-shi, JAPAN Takao, Haruhito, Kobe-shi, JAPAN

PATENT ASSIGNEE(S): Tigers Polymer Corporation, Osaka, JAPAN (non-U.S.

corporation)

NUMBER KIND DATE PATENT INFORMATION: US 20060099330 A1 20060511 US 2005-311366 A1 20051220 (11)

APPLICATION INFO.:

RELATED APPLN. INFO.: Division of Ser. No. US 2002-212517, filed on 6 Aug 2002, PENDING Continuation of Ser. No. US 2000-626239, filed on 26 Jul 2000, GRANTED, Pat. No. US 6451469

NUMBER DATE JP 1999-210685 PRIORITY INFORMATION: 19990726 JP 2000-6233 20000112 DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: PILLSBURY WINTHROP SHAW PITTMAN, LLP, P.O. BOX 10500,

MCLEAN, VA, 22102, US

NUMBER OF CLAIMS: 19 1-19 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 1 Drawing Page(s)

LINE COUNT: 599

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

A fuel cell separator unit having a crosslinked rubber layer is fabricated by coating a rubber-containing coating agent on the periphery of the surface of a separator to form a thin, unvulacanized rubber layer, and then vulcanizing or crosslinking the thin rubber layer. A tightly sealed fuel cell is constituted by providing both sides of the main body of the fuel cell with separator units fabricated in the manner described above. When a fuel cell separator fabricated through a crosslinking by radioactive ray irradiation, the performance of the fuel

cell is not hindered by the ingredient(s) of a rubber packing. The present invention provides a fuel cell sealing structure which ensures a perfect sealing. According to the present invention, a step of attaching

a thin rubber packing is no longer necessary.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 2 OF 23 USPATFULL on STN

ACCESSION NUMBER: 2005:74599 USPATFULL

Thermally modified carbon blacks for various type TITLE: applications and a process for producing same INVENTOR(S): Ayala, Jorge Armando, Kennesaw, GA, UNITED STATES Wang, Weidong, Marietta, GA, UNITED STATES Edwards, Charles, Roswell, GA, UNITED STATES

Herd, Charles R., Woodstock, GA, UNITED STATES Lamba, Rakshit, Acworth, GA, UNITED STATES

NUMBER KIND DATE PATENT INFORMATION: US 20050063893 A1 20050324 APPLICATION INFO:: US 2004-786690 A1 20040225 (10) RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2003-666048, filed on 18 Sep 2003, PENDING

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: GARVEY SMITH NEHRBASS & DOODY, LLC, THREE LAKEWAY CENTER, 3838 NORTH CAUSEWAY BLVD., SUITE 3290.

METAIRIE, LA, 70002

NUMBER OF CLAIMS: 11

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 4 Drawing Page(s)

LINE COUNT: 1618

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Thermally modified carbon blacks having such properties and of such purity so as to provide improved performance properties in food contact type applications, moisture cured polymer systems, zinc-carbon "dry cell" batteries, electrochemical applications such as alkaline batteries, other electrochemical power sources and other electronic applications, and for semi-conductive wire and cable applications; bladder compounds which show both improved thermal conductivity and improved processability; and other applications which may apply but are not necessarily specified herein; the carbon blacks produced by a continuous heat treatment process, or a variation of that process as it may develop.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 3 OF 23 USPATFULL on STN

ACCESSION NUMBER: 2005:74598 USPATFULL

TITLE: Thermally modified carbon blacks for various type

applications and a process for producing same INVENTOR(S): Tandon, Deepak, Kennesaw, GA, UNITED STATES

Ayala, Jore Armando, Kennesaw, GA, UNITED STATES Taylor, Rodney Lynn, Acworth, GA, UNITED STATES Zak, Mark S., Norwalk, CT, UNITED STATES

Barsukov, Igor V., Glenview, IL, UNITED STATES

Doninger, Joseph E., Lake Forest, IL, UNITED STATES Booth, Peter, Geneva, IL, UNITED STATES

NUMBER KIND DATE PATENT INFORMATION: US 20050063892 A1 20050324 APPLICATION INFO.: US 2003-666048 A1 20030918 (10)

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION LEGAL REPRESENTATIVE: GARVEY SMITH NEHRBASS & DOODY, LLC, THREE LAKEWAY

CENTER, 3838 NORTH CAUSEWAY BLVD., SUITE 3290, METAIRIE, LA, 70002

NUMBER OF CLAIMS: 36

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 16 Drawing Page(s) LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

An electro thermal fluidized bed furnace is adapted to be used in a process for continuously heat treating of fine particulate matter, such as carbon black material, by continuously introducing a non-reactive fluidizing gas through the nozzles of the furnace at a pre-determined rate, continuously introducing untreated carbon black material through the feed pipe of the furnace at a predetermined rate so that it forms a fluidized bed, energizing the electrode so as to heat the fluidized bed, and continuously collecting the treated carbon black from the discharge pipe. The carbon black collected from the discharge pipe exhibits properties of having the PAHs and sulfur removed, the carbon black has

been graphitized, the moisture pick-up by the carbon black has been eliminated and the carbon black is more oxidation resistant, Furthermore, the resultant furnace carbon backs have a particle size of 7-100 nm and an oil absorption number of 50-300 ml/100 q., while the thermal blacks have a particle size of 200-500 nm and an oil absorption number of less than 50 ml/100 q. All of these properties result in thermally modified carbon blacks having such properties and of such purity so as to provide improved performance properties in food contact type applications, moisture cured polymer systems, zinc-carbon dry cell battery applications, and semi-conductive wire and cable applications.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 4 OF 23 USPATFULL on STN

ACCESSION NUMBER: 2004:61298 USPATFULL

TITLE: Device and method for converting carbon containing feedstock into carbon containing materials, having a

defined nanostructure

Fabry, Frederic, Cannet, FRANCE INVENTOR(S): Grivei, Eusebiu, La Hulpe, BELGIUM Probst, Nicolas, Brussels, BELGIUM Smet, Richard, Aartselaar, BELGIUM

Peroy, Jean-Yves, Angoustrine, FRANCE Flamant, Gilles, Llo, FRANCE

Fulcheri, Lauent, Mouans-Sartoux, FRANCE

Leroux, Patrick, LeCannet, FRANCE Fischer, Francis, Sins, SWITZERLAND

| | NUMBER | KIND | DATE | |
|---------------------|-----------------|------|----------|------|
| | | | | |
| PATENT INFORMATION: | US 20040045808 | A1 | 20040311 | |
| | US 7452514 | B2 | 20081118 | |
| APPLICATION INFO.: | US 2003-380647 | A1 | 20030922 | (10) |
| | WO 2001-EP10835 | | 20010919 | |

NUMBER DATE

PRIORITY INFORMATION: EP 2000-120115 20000919 DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Michael R Hull, Marshall Gerstein & Borun, Sears Tower Suite 6300, 233 South Wacker Drive, Chicago, IL,

60606-6357

NUMBER OF CLAIMS: 10 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 1 Drawing Page(s)

LINE COUNT: 489

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Apparatus and process for producing carbon black or carbon containing AB compounds by converting a carbon containing feedstock, comprising the following steps: generating a plasma gas with electrical energy, guiding the plasma gas through a venturi, whose diameter is narrowing in the direction of the plasma gas flow, guiding the plasma gas into a reaction area, in which under the prevailing flow conditions generated by aerodynamic and electromagnetic forces, no significant recirculation of feedstock into the plasma gas in the reaction area recovering the reaction products from the reaction area and separating carbon black or carbon containing compounds from the other reaction products.

L9 ANSWER 5 OF 23 USPATFULL on STN

ACCESSION NUMBER: 2004:18297 USPATFULL

TITLE: Carbon blacks and uses thereof

INVENTOR(S): Bhatt, Sandeep, Boxford, MA, UNITED STATES

NUMBER KIND DATE _____ PATENT INFORMATION: US 20040013599 A1 20040122 APPLICATION INFO:: US 2003-620269 A1 20030715 (10)

NUMBER DATE

PRIORITY INFORMATION: US 2002-397287P 20020719 (60)

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Martha Ann Finnegan, Esq., Cabot Corporation, 157

Concord Road, Billerica, MA, 01821-7001

NUMBER OF CLAIMS: EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 2 Drawing Page(s)

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Carbon blacks are described having an I.sub.2 Number of 50-112 mg/g, and a primary particle size of not greater than 25 nm and are particularly well suited for use in the production of polymer compositions. Also described are polymer compositions incorporating the carbon blacks.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 6 OF 23 USPATFULL on STN

ACCESSION NUMBER: 2002:337171 USPATFULL

TITLE: Sealing structure of fuel cell and process for molding

rubber packing

INVENTOR(S): Nakamura, Yuzo, Kobe-shi, JAPAN Takao, Haruhito, Kobe-shi, JAPAN

NUMBER KIND DATE US 20020192529 A1 20021219 PATENT INFORMATION: US 7052797 B2 20060530 APPLICATION INFO:: US 2002-212517 A1 20020806 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-626239, filed on 26

Jul 2000, GRANTED, Pat. No. US 6451469

NUMBER DATE PRIORITY INFORMATION: JP 1999-210685 19990726 JP 2000-6233 20000112

DOCUMENT TYPE: FILE SEGMENT: Utility

FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Pillsbury Winthrop LLP, Intellectual Property Group,

1600 Tysons Boulevard, McLean, VA, 22102

19 NUMBER OF CLAIMS: NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 1 Drawing Page(s) LINE COUNT: 607

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

A fuel cell separator unit having a crosslinked rubber layer is fabricated by coating a rubber-containing coating agent on the periphery

of the surface of a separator to form a thin, unvulacanized rubber layer, and then vulcanizing or crosslinking the thin rubber layer. A tightly sealed fuel cell is constituted by providing both sides of the main body of the fuel cell with separator units fabricated in the manner described above. When a fuel cell separator fabricated through a crosslinking by radioactive ray irradiation, the performance of the fuel cell is not hindered by the ingredient(s) of a rubber packing. The present invention provides a fuel cell sealing structure which ensures a perfect sealing. According to the present invention, a step of attaching a thin rubber packing is no longer necessary.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 7 OF 23 USPATFULL on STN

ACCESSION NUMBER: 2002:238768 USPATFULL

TITLE: Sealing structure of fuel cell and process for molding

rubber packing

INVENTOR(S): Nakamura, Yuzo, Kobe, JAPAN Takao, Haruhito, Kobe, JAPAN

PATENT ASSIGNEE(S): Tigers Polymer Corporation, Toyonaka, JAPAN (non-U.S.

corporation)

NUMBER KIND DATE PATENT INFORMATION: US 6451469 B1 20020917 US 2000-626239 20000726 APPLICATION INFO.: 20000726 (9)

NUMBER DATE _____ JP 1999-210685 19990726 JP 2000-6233 20000112 PRIORITY INFORMATION: DOCUMENT TYPE: Utility

FILE SEGMENT: GRANTED PRIMARY EXAMINER: Weiner, Laura

LEGAL REPRESENTATIVE: Pillsbury Winthrop, LLP

NUMBER OF CLAIMS: 32 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 3 Drawing Figure(s); 1 Drawing Page(s)

LINE COUNT:

A fuel cell separator unit having a crosslinked rubber layer is fabricated by coating a rubber-containing coating agent on the periphery of the surface of a separator to form a thin, unvulacanized rubber layer, and then vulcanizing or crosslinking the thin rubber layer. A tightly sealed fuel cell is constituted by providing both sides of the main body of the fuel cell with separator units fabricated in the manner described above. When a fuel cell separator fabricated through a crosslinking by radioactive ray irradiation, the performance of the fuel cell is not hindered by the ingredient(s) of a rubber packing. The present invention provides a fuel cell sealing structure which ensures a perfect sealing. According to the present invention, a step of attaching a thin rubber packing is no longer necessary.

L9 ANSWER 8 OF 23 USPATFULL on STN

ACCESSION NUMBER: 2001:173242 USPATFULL

TITLE: Semiconductive polyolefin compositions and cables

covered with the same

INVENTOR(S):

INVENTOR(S): Sarma, Haridos, Brampton, Canada PATENT ASSIGNEE(S): Equistar Chemicals, LP, Houston, TX, United States

(U.S. corporation)

NUMBER KIND DATE US 6299978 B1 20011009 US 2000-524022 20000313 PATENT INFORMATION: APPLICATION INFO.: 20000313 (9) NUMBER DATE PRIORITY INFORMATION: US 1999-127392P 19990411 (60) PILE SEGMENT: GRANTED
PRIMARY EXAMINER: Kelly, Cynthia H.
ASSISTANT EXAMINER: Gray, J. M.
NUMBER OF CLAIMS: 15
EXEMPLARY CLAIM: NUMBER OF CLAIM: LINE COUNT: 359 CAS INDEXING IS AVAILABLE FOR THIS PATENT. A semi-conducting composition for use as conductor shield in extruded coatings on high voltage electrical cables, and the resultant cables. The composition consists essentially of (a) a polymeric component of a blend of 0-99% by weight of polyolefin and 1-100% by weight of a ter-polymer of ethylene/ vinyl acetate (vinyl alcohol), (b) conducting carbon black, and (c) an antioxidant. CAS INDEXING IS AVAILABLE FOR THIS PATENT. L9 ANSWER 9 OF 23 USPATFULL on STN ACCESSION NUMBER: 1999:61000 USPATFULL TITLE: Injection molded article used with photosensitive material INVENTOR(S): Akao, Mutsuo, Kanagawa, Japan PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Kanagawa, Japan (non-U.S. corporation) NUMBER KIND DATE _____ PATENT INFORMATION: US 5906813 19990525 APPLICATION INFO:: US 1997-880504 19970623 19970623 (8) NUMBER DATE PRIORITY INFORMATION: JF 1996-162043 19960621 JF 1996-177642 19960708 DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Page, Thurman K.
ASSISTANT EXAMINER: Shelborne, Kathryne E. LEGAL REPRESENTATIVE: Sughrue, Mion, Zinn, Macpeak & Seas, PLLC NUMBER OF CLAIMS: 13 EXEMPLARY CLAIM: 1 NUMBER OF DRAWINGS: 11 Drawing Figure(s); 8 Drawing Page(s)
LINE COUNT: 1678 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Injection molding is carried out by using styrene-based resin composition. As to the styrene-based resin composition, styrene-based resin, in which melt flow index is 3.0-40.0 g/10 minutes, a Rockwell

hardness is M38 or more, an Izod impact strength is 2.0 Kg.multidot.cm/cm or more, a bending elastic modulus is 20,000 Kg/cm.sup.2 or more, and a Vicat softening point is 78° C. or more, is 50 weight % or more, total of at least two kinds selected from

lubricant or surfactant is 0.01-20 weight %, a thermoplastic resin having experienced twice or more heat histories at 150° C. or more is 3 weight % or more, and total of at least one of antioxidant, deodorant and an agent imparting fragrance is 0.01-20 weight %. Styrene-based resin composition having melt flow index of 1-50 g/10 minutes, and including ethylbenzene of 0.001-1 weight %, rubber-like material of 0.1-15 weight %,

and

AR

light shielding material of 0.1-10 weight %, may be used.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 10 OF 23 USPATFULL on STN

ACCESSION NUMBER: 1998:27746 USPATFULL

TITLE: Method for recovering carbon black from composites INVENTOR(S): Holley, Carl A., Riverview, MI, United States PATENT ASSIGNEE(S): Ferro-Tech Tire Reclamation, Inc., Wyandotte, MI,

United States (U.S. corporation)

NUMBER KIND DATE PATENT INFORMATION: US 5728361 19980317 US 1995-551329 19951101 (8) APPLICATION INFO.: DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Lewis, Michael
ASSISTANT EXAMINER: Hendrickson, Stuart L.

LEGAL REPRESENTATIVE: Barnes, Kisselle, Raisch, Chaote, Whittemore & Hulbert,

NUMBER OF CLAIMS: 38 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 10 Drawing Figure(s); 4 Drawing Page(s)

LINE COUNT: 1430

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The invention provides a method and system for continuously recovering carbon black from a plurality of composites where each one of the composites comprises carbon black and polymers. The basic method of the invention comprises a heating step which is conducted in a reactor. In the method, it is necessary to prepare a series of mixtures of the composites, with each one of the series comprising a distribution of carbon black properties substantially similar to the other mixtures of the series. The composites may be fragmentized or comminuted into smaller pieces more suitable for pyrolysis and decomposition reactions in the reactor. In the reactor, the fragmentized mixtures are heated to a temperature sufficient to crack the polymers and to form a vaporizable constituent. The vaporizable constituents are removed from the reactor at first and second outlet ends whereby the amount of time the vaporized constituents are in the reactor is reduced. That is, their residence time is reduced by the method of the invention which includes removal at two ends. The vaporized constituents are then cooled to form condensate fraction and a gaseous fraction. The gaseous fraction is then used for reinjection into the reactor chamber.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 11 OF 23 USPATFULL on STN

ACCESSION NUMBER: 96:84979 USPATFULL TITLE:

Semiconductive power cable shield TITLE: SEMIZONGUELLY POWER CADE SHIELD IN United States PATENT ASSIGNEE(S): BICC Cables Corporation, Indianapolis, IN, United States PATENT ASSIGNEE(S): BICC Cables Corporation, Indianapolis, IN, United States PATENT ASSIGNEE(S): BICC Cables Corporation, Indianapolis, IN, United States PATENT ASSIGNEE(S): BICC Cables Corporation (S): Corporatio

States (U.S. corporation)

| | NUMBER | KIND | DATE | |
|---|-----------------------------------|---------|----------------------|-------|
| PATENT INFORMATION:
APPLICATION INFO.:
DOCUMENT TYPE: | US 5556697
US 1994-217116 | | 19960917
19940324 | |
| FILE SEGMENT: | Utility
Granted | | | |
| PRIMARY EXAMINER:
ASSISTANT EXAMINER: | Ryan, Patrick
Yamnitsky, Marie | R. | | |
| LEGAL REPRESENTATIVE:
NUMBER OF CLAIMS: | Oliff & Berridge | | | |
| EXEMPLARY CLAIM: | 1 | | | |
| LINE COUNT: AB Vulcanizable sem: | 538
iconductive shield | d compo | sitions c | ontai |

Vulcanizable semiconductive shield compositions contain a linear, single-site catalyzed polymer formed by polymerizing ethylene with at least one comonomer selected from C.sub.3 to C.sub.20 alpha-olefins; a carbon black selected from furnace carbon blacks that contain ash and sulfur in amounts of 50 ppm or less and have crystal dimensions L.sub.a and L.sub.c of 30 Å or less, acetylene carbon blacks, and furnace carbon blacks having an ASTM grade of N-351; and a crosslinking agent. The compositions may be used to manufacture semiconductive shields for electrical conductors, such as power cables. The semiconductive shields exhibit improved processability, low water vapor transmission and low shrinkback, without abrading or corroding extrusion equipment.

L9 ANSWER 12 OF 23 USPATFULL on STN

ACCESSION NUMBER: 96:70315 USPATFULL

TITLE: Molded article for photographic photosensitive

material, molding method and package INVENTOR(S): Akao, Mutsuo, Minami-ashigara, Japan

Suzuki, Osamu, Minami-ashigara, Japan PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Kanagawa, Japan (non-U.S.

corporation)

| | NUMBER | KIND | DATE | |
|---------------------|----------------|------|----------|-----|
| | | | | |
| PATENT INFORMATION: | US 5543270 | | 19960806 | |
| APPLICATION INFO.: | US 1994-233978 | | 19940428 | (8) |

NUMBER DATE

PRIORITY INFORMATION: JP 1993-103063 19930428

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Huff, Mark F.

LEGAL REPRESENTATIVE: Sughrue, Mion, Zinn, Macpeak & Seas

NUMBER OF CLAIMS: 30 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 9 Drawing Figure(s); 4 Drawing Page(s)

LINE COUNT: 3273

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

A molded article for a photographic photosensitive material formed of a resin composition comprising of (a) 50 weight % or more of a rubber-containing aromatic monovinyl resin having a melt flow index of 3 to 40 g/10 minutes, a bending elastic modulus of 20,000 kg/cm.sup.2 or more and a Vicat softening point of 78° C. or more and containing 1 to 12 weight % of a rubber material, (b) 0.1 to 10 weight % of a light-shielding material, and (c) 0.01 to 20 weight % of at least one of a lubricant and an antistatic agent. The molded article is excellent in

physical strength, photographic properties, injection moldability and the like.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 13 OF 23 USPATFULL on STN

ACCESSION NUMBER: 94:86022 USPATFULL TITLE: Low ash carbon blacks

INVENTOR(S): Weaver, Daniel W., Upton, United Kingdom

Hrach, Jr., Frank J., Parkersberg, WV, United States Shieh, Chung-Huei, Lexington, MA, United States

Sifleet, William L., Acton, MA, United States Zimmer, Jay J., Pampa, TX, United States

PATENT ASSIGNEE(S): Cabot Corporation, Boston, MA, United States (U.S.

corporation)

NUMBER KIND DATE ______ PATENT INFORMATION: US 5352289 19941004 APPLICATION INFO:: US 1992-995408 19921218 (7)

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

FILE SEGMENT: Granted
PRIMARY EXAMINER: Straub, Gary P.
ASSISTANT EXAMINER: Hendrickson, Stuart L.

LEGAL REPRESENTATIVE: Chaletsky, Lawrence A.

NUMBER OF CLAIMS: 19 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 1 Drawing Figure(s); 1 Drawing Page(s)

LINE COUNT: 958

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Novel furnace carbon blacks that impart advantageous properties to rubber and plastic compositions and may be utilized in the place of

acetylene blacks. The furnace carbon blacks have an ash level less than or equal to 50 ppm, preferably

less than or equal to 30 ppm, most preferably less than or equal to 10 ppm, a sulfur level less than or equal to 50 ppm, preferably less than or equal to 30 ppm most preferably less than or equal to 10 ppm, a L.sub.a less than or equal to 30 A and a L.sub.c less than or equal to 30 Å. Also disclosed are novel rubber and plastic compositions incorporating the novel furnace carbon blacks which exhibit advantageous properties, particularly in extending the useful service life of power

cables produced using the compositions.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 14 OF 23 USPATFULL on STN ACCESSION NUMBER: 88:65423 USPATFULL

TITLE: High density record including carbon black particles

purified by electrolysis

INVENTOR(S): Goshima, Toshikazu, Sagamihara, Japan

Nishizawa, Akira, Yokohama, Japan Namikawa, Kazuhira, Yokohama, Japan Hamaguchi, Toshiaki, Yokohama, Japan Nakamura, Mutsuaki, Yokohama, Japan

PATENT ASSIGNEE(S): Victor Company of Japan, Limited, Japan (non-U.S.

corporation)

NUMBER KIND DATE PATENT INFORMATION: US 4776935 19881011 APPLICATION INFO.: US 1984-612011 19840518 (6)

NUMBER DATE

PRIORITY INFORMATION: JP 1983-89086 19830523 DOCUMENT TYPE: Utility

FILE SEGMENT: Granted

PRIMARY EXAMINER: Cardillo, Raymond F. ASSISTANT EXAMINER: Nguyen, Hoa T.

LEGAL REPRESENTATIVE: Lowe, Price, LeBlanc, Becker & Shur

NUMBER OF CLAIMS: EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 1 Drawing Figure(s); 1 Drawing Page(s)
LINE COUNT: 246

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

A high density information record of the electrostatic capacitance type which comprises a record substrate on which signal information is recorded as geometric variations. The substrate is made of a vinyl chloride resin, and carbon black which is purified by electrolysis to remove impurities therefrom.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 15 OF 23 USPATFULL on STN

ACCESSION NUMBER: 72:8799 USPATFULL

TITLE: SOLVATION OF COAL IN BYPRODUCT STREAMS

INVENTOR(S): Roach, Jack W., Oklahoma City, OK, United States Garwin, Leo, Oklahoma City, OK, United States PATENT ASSIGNEE(S): Kerr-McGee Corporation, Oklahoma City, OK, United

States

NUMBER KIND DATE PATENT INFORMATION: US 3642608
APPLICATION INFO.: US 1970-1688 19720215 19700109 (5) DOCUMENT TYPE: Utility FILE SEGMENT: Granted
PRIMARY EXAMINER: Gantz, Delbert E.
ASSISTANT EXAMINER: O'Keefe, Veronica

LEGAL REPRESENTATIVE: Shanley and ONeil

LEGAL REFROGRAM: 17
NUMBER OF DRAWINGS: 17
NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Coal is solubilized in highly aromatic petroleum byproduct streams such as catalytic cracker recycle oil and slurry oil to produce a coal solution having a low viscosity which is readily deashed by settling and/or filtering. The coal solution has a low sulfur and mineral ash content and it may be used in the preparation of fuels or as a feedstock to a furnace process for producing carbon black. All or part of the solvent content of the coal solution may be recovered and recycled in the process as a solvent, and the deashed and desulfurized coal thus produced may be used as a solid or molten fuel, or it may be blended with petroleum refinery streams to produce liquid fuels having desired specifications and a feedstock for producing furnace carbon black.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1974:66895 USPATOLD

TITLE: MANUFACTURE OF CARBON BLACK FROM FEEDSTOCK OIL MODIFIED

WITH RUBBER

INVENTOR(S): KELLY W

COLUMBIAN CARBON COMPANY PATENT ASSIGNEE(S):

| | NUMBER | KIND | DATE |
|---------------------|----------------|------|----------|
| | | | |
| PATENT INFORMATION: | US 3808328 | A | 19740430 |
| APPLICATION INFO.: | US 1969-884037 | | 19691201 |

NUMBER DATE PRIORITY INFORMATION: US 1969-884037 19691210 Utility GRANTED

DOCUMENT TYPE: FILE SEGMENT:

PRIMARY EXAMINER: MEROS, EDWARD J LINE COUNT: 313

CAS INDEXING IS AVAILABLE FOR THIS PATENT. CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 17 OF 23 USPATOLD on STN

ACCESSION NUMBER: 1969:28144 USPATOLD TITLE: MAGNETIC CARBON BLACKS

INVENTOR(S): OTTO WOLFGANG K F PATENT ASSIGNEE(S): ASHLAND OIL INC.

| | NUMBER | KIND | DATE |
|---------------------|----------------|------|----------|
| PATENT INFORMATION: | US 3448052 | A | 19690603 |
| APPLICATION INFO.: | US 1965-448252 | | 19650401 |

NUMBER DATE NUMBER -----

PRIORITY INFORMATION: US 1965-448252 19650415 DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

PRIMARY EXAMINER: LEVOW, TOBIAS E LINE COUNT: 399

CAS INDEXING IS AVAILABLE FOR THIS PATENT. CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 18 OF 23 USPATOLD on STN

ACCESSION NUMBER: 1969:11299 USPATOLD
TITLE: PROCESS FOR PRODUCTION OF METAL BEARING CARBON BLACK TITLE: PROCESS FOR PRODI
INVENTOR(S): OTTO WOLFGANG K
PATENT ASSIGNEE(S): ASHLAND OIL INC.

OTTO WOLFGANG K F

| | NUMBER | KIND | DATE |
|--|---|--------|----------------------|
| PATENT INFORMATION:
APPLICATION INFO.: | US 3431205
US 1965-488283 | A | 19690304
19650901 |
| | NUMBER | | DATE |
| PRIORITY INFORMATION:
DOCUMENT TYPE:
FILE SEGMENT:
PRIMARY EXAMINER:
ASSISTANT EXAMINER: | US 1965-488283
Utility
GRANTED
LEVOW, TOBIAS E
EDMONDS, R D | to des | 19650917 |

LINE COUNT: 386

CAS INDEXING IS AVAILABLE FOR THIS PATENT. CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 19 OF 23 USPATOLD on STN

ACCESSION NUMBER: 1959:28887 USPATOLD

TITLE: Production of carbon black oil

INVENTOR(S): DE RIDDER GYSBERT F BRYAN WILLIAM P

NUMBER KIND DATE PATENT INFORMATION: US 2895895 A 19590721 NUMBER DATE

-----PRIORITY INFORMATION: US 1958-706654 19580102 DOCUMENT TYPE: Utility

FILE SEGMENT: GRANTED LINE COUNT: 345

CAS INDEXING IS AVAILABLE FOR THIS PATENT. CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 20 OF 23 USPAT2 on STN

ACCESSION NUMBER: 2004:61298 USPAT2

TITLE: Device and method for converting carbon containing feedstock into carbon containing materials, having a

defined nanostructure

INVENTOR(S): Fabry, Frederic, Le Cannet, FRANCE

Grivei, Eusebiu, La Hulpe, BELGIUM Probst, Nicolas, Brussels, BELGIUM Smet, Richard, Aartselaar, BELGIUM

Peroy, Jean-Yves, Angoustrine, FRANCE Flamant, Gilles, Llo, FRANCE

Fulcheri, Lauent, Mouans-Sartoux, FRANCE Leroux, Patrick, LeCannet, FRANCE Fischer, Francis, Sins, SWITZERLAND

PATENT ASSIGNEE(S): Timcal SA, Bodio, SWITZERLAND (non-U.S. corporation)

NUMBER KIND DATE US 7452514 B2 20081118 WO 2002024819 20020328 US 2001-380647 20010919 PATENT INFORMATION: APPLICATION INFO.: 20010919 (10)

WO 2001-EP10835 20010919 20030922 PCT 371 date

NUMBER DATE PRIORITY INFORMATION: EP 2000-120115 20000919

495

DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED

FILE SEGMENT: GRANIED: GRANIED: Mayekar, Kishor LEGAL REPRESENTATIVE: Finnegan, Henderson, Farabow, Garrett & Dunner, LLP

NUMBER OF CLAIMS: 29 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Apparatus and process for producing carbon black or carbon containing

compounds by converting a carbon containing feedstock, comprising the following steps: generating a plasma gas with electrical energy, guiding the plasma gas through a venturi, whose diameter is narrowing in the direction of the plasma gas flow, guiding the plasma gas into a reaction area, in which under the prevailing flow conditions generated by aerodynamic and electromagnetic forces, no significant recirculation of feedstock into the plasma gas in the reaction area recovering the reaction products from the reaction area and separating carbon black or carbon containing compounds from the other reaction products.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 21 OF 23 USPAT2 on STN

ACCESSION NUMBER: 2002:337171 USPAT2

TITLE: Sealing structure of fuel cell and process for molding

rubber packing INVENTOR(S): Nakamura, Yuzo, Kobe, JAPAN

Takao, Haruhito, Kobe, JAPAN Tigers Polymers Corporation, Osaka, JAPAN (non-U.S. PATENT ASSIGNEE(S):

corporation)

NUMBER KIND DATE PATENT INFORMATION: US 7052797 B2 20060530 US 2002-212517 20020806 (10) APPLICATION INFO.:

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-626239, filed on 26 Jul 2000, Pat. No. US 6451469

NUMBER DATE -----

PRIORITY INFORMATION: JP 1999-210685 19990726 JP 2000-6233 20000112 DOCUMENT TYPE: Utility FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Weiner, Laura

LEGAL REPRESENTATIVE: Pillsbury Winthrop Shaw Pittman LLP

NUMBER OF CLAIMS: 11 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 3 Drawing Figure(s); 1 Drawing Page(s)

LINE COUNT: 579

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

A fuel cell separator unit having a crosslinked rubber layer is fabricated by coating a rubber-containing coating agent on the periphery of the surface of a separator to form a thin, unvulacanized rubber layer, and then vulcanizing or crosslinking the thin rubber layer. A tightly sealed fuel cell is constituted by providing both sides of the main body of the fuel cell with separator units fabricated in the manner described above. When a fuel cell separator fabricated through a crosslinking by radioactive ray irradiation, the performance of the fuel cell is not hindered by the ingredient(s) of a rubber packing. The present invention provides a fuel cell sealing structure which ensures a perfect sealing. According to the present invention, a step of attaching a thin rubber packing is no longer necessary.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L9 ANSWER 22 OF 23 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:847589 CAPLUS

DOCUMENT NUMBER: 141:332963

TITLE: Carbon black-containing expandable vinylaromatic

polymers suitable for production of thermal insulators INVENTOR(S):

Ponticiello, Antonio; Simonelli, Alessandra;

Zamperlin, Loris

PATENT ASSIGNEE(S): Polimeri Europa S.P.A., Italy

SOURCE: PCT Int. Appl., 28 pp. CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1 PATENT INFORMATION:

| PA: | TENT : | | | | KIN | | DATE | | | APPI | LICAT | ION | NO. | | D. | ATE | | |
|-----|--------|------|------|-----|-------------|-----|------|----------------|-----|------|-------|------|-----|----------|-----|------|-----|--|
| WO | 2004 | | | | A1 20041014 | | | WO 2004-EP2840 | | | | | | 20040311 | | | | |
| | W: | ΑE, | AG, | AL, | AM, | AT, | AU, | AZ, | BA, | BB, | BG, | BR, | BW, | BY, | BZ, | CA, | CH, | |
| | | CN, | CO, | CR, | CU, | CZ, | DE, | DK, | DM, | DZ, | EC, | EE, | EG, | ES, | FI, | GB, | GD, | |
| | | GE, | GH, | GM, | HR, | HU, | ID, | IL, | IN, | IS, | JP, | KE, | KG, | KP, | KR, | KZ, | LC, | |
| | | LK, | LR, | LS, | LT, | LU, | LV, | MA, | MD, | MG, | MK, | MN, | MW, | MX, | MZ, | NA, | NI, | |
| | | NO, | NZ, | OM, | PG, | PH, | PL, | PT, | RO, | RU, | SC, | SD, | SE, | SG, | SK, | SL, | SY, | |
| | | TJ, | TM, | TN, | TR, | TT, | TZ, | UA, | UG, | US, | UZ, | VC, | VN, | YU, | ZA, | ZM, | ZW | |
| | RW: | BW, | GH, | GM, | KE, | LS, | MW, | MZ, | SD, | SL, | SZ, | TZ, | UG, | ZM, | ZW, | AM, | AZ, | |
| | | BY, | KG, | KΖ, | MD, | RU, | TJ, | TM, | ΑT, | BE, | BG, | CH, | CY, | CZ, | DE, | DK, | EE, | |
| | | ES, | FI, | FR, | GB, | GR, | HU, | IE, | IT, | LU, | MC, | NL, | PL, | PT, | RO, | SE, | SI, | |
| | | SK, | TR, | BF, | ВJ, | CF, | CG, | CI, | CM, | GΑ, | GN, | GQ, | GW, | ML, | MR, | NE, | SN, | |
| | | TD, | | | | | | | | | | | | | | | | |
| | 2519 | | | | | | | | | | 2004- | | | | | | | |
| | | | | | | | | | | EP 2 | 2004- | 7194 | 54 | | 2 | 0040 | 311 | |
| EP | 1608 | | | | | | 2008 | | | | | | | | | | | |
| | R: | | | | | | | | | | IT, | | | | | | | |
| | | | | | | | | | | | TR, | | | | | | | |
| | 2004 | 0086 | 92 | | A | | | | | | 2004- | | | | | | | |
| | 1768 | 096 | | | A | | | | | | 2004- | | | | | | | |
| | 2006 | | | | | | | | | | 2006- | | | | | | | |
| | 2327 | 711 | | | C2 | | | | | | 2005- | | | | | | | |
| | 3981 | | | | | | | | | | 2004- | | | | | | | |
| | 2308 | | | | Т3 | | | | | | 2004- | | | | | | | |
| | 2005 | | | | | | 2007 | | | | 2005- | | | | | | | |
| | 2006 | | | | A1 | | 2006 | 1207 | | | 2006- | | | | | | | |
| RIT | Y APP | LN. | INFO | . : | | | | | | | 2003- | | | | | | | |
| | | | | | | | | | | WO 2 | 2004- | EP28 | 40 | | W 2 | 0040 | 311 | |

An expandable vinylarom, polymer comprises (a) a matrix obtained by polymerizing 50-100% of one or more vinylarom. monomers and 0-50% of a copolymerizable monomer, (b) 1-10%, calculated with respect to the polymer (a), of an expanding agent in the polymer matrix, (c) 0.01-20%, calculated with respect to the polymer (a), of carbon black distributed in the polymer matrix and having an average diameter from 30 to 2000 nm, a surface

area

from 5 to 40 m2/q, a sulfur content from 0.1 to 2000 ppm, and an ash content from 0.001 to 1%. The expandable vinylarom, polymer is useful in production of plastic foams having low d. and reduced thermal conductivity

water (150), sodium pyrophosphate (0.2), styrene (100), benzoyl peroxide (0.25), tert-Bu perbenzoate (0.25), and carbon black T 990 (1 part) were charged into a stirred closed container, the carbon

black having an average diameter of 362 nm, a BET of 10 m2/g, an

ash content of 0.02% , a sulfur

content of 60 ppm, a weight loss with heat of 0.1%, a DBPA number of 44 mL/(100 g). The mixture was heated to 90° and stirred for 2 h at

90°, followed by adding 4 parts of a 10%-solution of

polyvinylpyrrolidone, heating the mixture for 2 h to 100°, adding 7

parts of a 70/30 mixture of n-pentane and isopentane, heating for 4 h to 125° , and cooling the mixture. The beads of the expandable polymer were recovered and washed with deionized water containing 0.05% of a nonionic surfactant.

L9 ANSWER 23 OF 23 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2001:152336 CAPLUS

DOCUMENT NUMBER: 134:194638

TITLE: Production and use of carbon black

with low ash and sulfur

content

INVENTOR(S): Bergemann, Klaus; Vogel, Karl

PATENT ASSIGNEE(S): Degussa-Huls Aktiengesellschaft, Germany

SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent
LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1 PATENT INFORMATION:

| PA | PATENT NO. | | | | | | KIND DATE | | | | PLICA | DATE | | | | | |
|---------|------------|-------|-----|-------|------|-----|-----------|------|-------|-----|-------|------|------|------|------|------|-----|
| | EP 1078958 | | | | A1 | | | | | ΞP | 1999 | -116 | 925 | | 1 | 9990 | 827 |
| EP | 1078 | 958 | | | В1 | | 2003 | 0528 | | | | | | | | | |
| | R: | AT, | BE, | CH, | DE, | DK, | ES, | FR, | GB, | GE | R, IT | , LI | LU, | NL, | SE, | MC, | PT |
| | | IE. | SI, | LT, | LV, | FI, | RO | | | | | | | | | | |
| PT | 1078 | 958 | | | T | | 2003 | 1031 | E | PΤ | 1999 | -116 | 925 | | 1 | 9990 | 827 |
| ES | 2201 | 606 | | | Т3 | | 2004 | 0316 | E | ΞS | 1999 | -116 | 925 | | 1 | 9990 | 827 |
| PRIORIT | Y APP | LN. I | NFO | . : | | | | | E | ΞP | 1999 | -116 | 925 | | A 1 | 9990 | 827 |
| AB Fu: | rnace | blac | k w | ith · | good | bea | d pr | oper | ties, | . 1 | ısefu | l in | cabl | e sh | ield | ing | and |

fuel cells, contains 0.005-0.05% ash and >0.005% S. A drawing of the furnace used in production is included.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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COST IN U.S. DOLLARS | SINCE FILE
ENTRY | TOTAL |
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| FULL ESTIMATED COST | 131.18 | 131.39 |
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| CA SUBSCRIBER PRICE | -3.20 | -3.20 |

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FILE CONTAINS CURRENT INFORMATION. LAST RELOADED: Dec 19, 2008 (20081219/UP).

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COST IN U.S. DOLLARS | SINCE FILE | TOTAL |
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FILE 'USPATOLD' ENTERED AT 00:17:39 ON 22 DEC 2008
CA INDEXING COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)
FILE 'USPAT2' ENTERED AT 00:17:39 ON 22 DEC 2008
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     (FILE 'HOME' ENTERED AT 23:55:23 ON 21 DEC 2008)
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     21 DEC 2008
L1
              1 S EP 0372343/PN
L2
              0 S EP 0126459/PN
L3
             0 S EP 126459/PN
L4
             57 S CARBON BLACK#(6A)(T990 OR PRINTEX 85)
L5
         40285 S (EXPAND? OR FOAM?) (4A) (STYREN? OR VINYL(1A) AROMATIC OR VINYLA
L6
              2 S L4 AND L5
L7
            207 S CARBON BLACK#(20A) (SULFUR(2A) (LEVEL OR CONTENT))
L8
           314 S CARBON BLACK#(20A)(ASH(3A)(LEVEL OR CONTENT#))
L9
            23 S L7 AND L8
L10
             1 S L5 AND L9
     FILE 'STNGUIDE' ENTERED AT 00:05:48 ON 22 DEC 2008
     FILE 'USPATFULL, USPATOLD, USPAT2, CAPLUS, JAPIO' ENTERED AT 00:17:39 ON
     22 DEC 2008
=> s (cellular?)(6a)(styren? or vinyl(1a)aromatic or vinylaromatic or polystyren?)
L11
         5667 (CELLULAR?) (6A) (STYREN? OR VINYL (1A) AROMATIC OR VINYLAROMATIC
               OR POLYSTYREN?)
=> s 111 and 14
L12
           0 L11 AND L4
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L13
            0 L11 AND L7
=> s 111 and 18
L14
           0 L11 AND L8
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COST IN U.S. DOLLARS
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                                                      ENTRY SESSION
                                                              152.01
FILL ESTIMATED COST
                                                      19.42
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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

CA SUBSCRIBER PRICE

SCHOOL STREET STREET

TOTAL SUBSCRIBER PRICE

SESSION

-3.20

-3.20

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